

CLAIMS

1. A transmission comprising:
a plurality of fluid passages configured to transmit fluid through the transmission for operating the transmission; and
a miniature electric motor operatively connected to a moveable
5 blocker positioned in one of said passages for actuating movement of the blocker between an open position in which fluid is allowed to flow through the passage, and a closed position in which the passage is blocked.
2. The transmission of claim 1, wherein the blocker is operatively positioned between an oil chamber and an oil sump to control the amount of fluid flowing from the oil chamber to the oil sump.
3. The transmission of claim 1, wherein said miniature motor is operatively connected to a transmission controller.
4. The transmission of claim 1, wherein the blocker is operatively positioned between a valve body channel and a clutch for controlling the amount of fluid flowing to the clutch.
5. The transmission of claim 1, wherein the miniature motor is positioned in said one of the passages and bathed in the fluid.
6. The transmission of claim 1, wherein the miniature motor is less than 5 millimeters in width and less than 10 millimeters in length.
7. The transmission of claim 1, wherein the miniature motor is characterized by the absence of an armature and windings.

8. A method of reducing spin losses in a transmission comprising:

providing a miniature electric motor connected to a blocker in a fluid passage; and

5 selectively actuating the miniature electric motor to move the blocker to block the passage, thereby reducing the amount of oil engaging spinning components of the transmission to reduce spin losses.

9. A transmission comprising:

a plurality of fluid passages configured to transmit fluid through the transmission for operating the transmission;

a miniature electric motor operatively connected to a moveable
5 blocker positioned in one of said passages for actuating movement of the blocker between an open position in which fluid is allowed to flow through the passage, and a closed position in which the passage is blocked;

wherein the miniature motor is positioned in said one of the passages and bathed in the fluid;

10 wherein the miniature motor is operatively connected to a transmission controller; and

wherein the miniature motor is less than 5 millimeters in width and less than 10 millimeters in length.